COPY FOR IB

PCT/KR2004/000575

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Artcle 36 and Rule 70)

Applicant's or agent's file reference OPF0327/PCT	FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. **PCT/KR2004/000575**	International filing date *(day/month/year)* **17 MARCH 2004 (17.03.2004)**	Priority date *(day/month/year)* 17 MARCH 2003 (17.03.2003)

International Patent Classification (IPC) or national classification and IPC

IPC7 H04M 1/23

Applicant

AHN, Jaewoo

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 4 sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

   a. ☒ (sent to the applicant and to the International Bureau) a total of 19 sheets, as follows:

      ☒ sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

      ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

   b. ☐ *(sent to the International Bureau only)* a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

   ☒ Box No. I Basis of the report

   ☐ Box No. II Priority

   ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

   ☐ Box No. IV Lack of unity of invention

   ☒ Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

   ☐ Box No. VI Certain documents cited

   ☐ Box No. VII Certain defects in the international application

   ☐ Box No. VIII Certain observations on the international application

Date of submission of the demamd	Date of completion of this report
12 OCTOBER 2004 (12.10.2004)	01 JULY 2005 (01.07.2005)

Name and mailing address of the IPEA/KR
Korean Intellectual Property Office
920 Dunsan-dong, Seo-gu, Daejeon 302-701,
Republic of Korea
Facsimile No. 82-42-472-7140

Authorized officer
SHIN, Jun Ho
Telephone No. 82-42-481-8129

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/KR2004/000575

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

   ☒ This report is based on translations from the original language into the following language English, which is the language of a translation furnished for the purposes of:

   ☐ international search (under Rules 12.3 and 23.1(b))
   ☒ publication of the international application (under Rule 12.4)
   ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the **elements** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this reort as "originally filed" and are not annexed to this report):*

   ☐ the international application as originally filed/furnished

   ☒ the description:
   pages 1 - 34 as originally filed/furnished
   pages* _____ received by this Authority on _____
   pages* _____ received by this Authority on _____

   ☒ the claims:
   pages _____ as originally filed/furnished
   pages* _____ as amended (together with any statment) under Article 19
   pages* 35 - 53 received by this Authority on 22.06.2005
   pages* _____ received by this Authority on _____

   ☒ the drawings:
   pages 1/7 - 7/7 as originally filed/furnished
   pages* _____ received by this Authority on _____
   pages* _____ received by this Authority on _____

   ☐ the sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:
   ☐ the description, pages _____
   ☐ the claims, Nos. _____
   ☐ the drawings, sheets _____
   ☐ the sequence listing *(specify)* : _____
   ☐ any table(s) related to sequence listing *(specify)* : _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
   ☐ the description, pages _____
   ☐ the claims, Nos. _____
   ☐ the drawings, sheets _____
   ☐ the sequence listing *(specify)*: _____
   ☐ any table(s) related to sequence listing *(specify)* : _____

** If item 4 applies, some or all of those sheets may be marked "superseded."*

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/KR2004/000575

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1 - 60	YES
	Claims	NONE	NO
Inventive step (IS)	Claims	1 - 60	YES
	Claims	NONE	NO
Industrial applicability (IA)	Claims	1 - 60	YES
	Claims	NONE	NO

2. Citations and explanations (Rule 70.7)

1. NOVELTY AND INVENTIVE STEP

Reference is made to the following documents:

D1 : KR 2002-0044105 (KANG, HOON KEE ET AL.) 14 June 2002
D2 : KR 2001-0036070 (LG INFORMATION & COMMUNICATIONS LTD.) 7 May 2001
D3 : KR 2001-0077631 (HWANG, JAE YEOB) 20 August 2001

D1 discloses a method of inputting characters in a mobile terminal by selectively and separately allocating basic letters, which is composed of combinations of basic consonants and basic vowels, in an array of keys in a mobile terminal and creating characters using one or more of the basic letters.

D2 discloses a method of inputting characters of a mobile communication terminal to the input Hangul easily by applying the creation principal, pronunciation rules and vowel classification of Hangul to the inputting of characters in a mobile terminal. In D2, whenever a character key is inputted, the consonants and vowels indicated on the key are displayed by turns. If the consonant having a palatal sound is inputted for longer time than a predetermined period, the palatal sound of the consonant is displayed.

D3 discloses a method of inputting quickly the Hangul by arranging consonants which are frequently used in a primary figure of each button with reference to a use frequency according to a phoneme of the Hangul.

(Continued on Supplemental Box)

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of:

(Continuation of Box No. V)
The subject matter of claims 1-60 differs from the prior arts in that alphabetic characters are assigned to the key buttons by dividing alphabetic (or Hangul, symbol) characters into a Group 1 for left hand inputting and a Group 2 for right hand inputting on the QWERTY keyboard, and also dividing alphabetic characters into three sets according to usage frequency. Indeed, the prior arts do not disclose the difference and even though the prior arts may be combined, it is not obvious to a skilled person in mobile terminal manufacturing industry to derive the subject matter of claims 1-60 from the prior arts. Therefore, the subject matter of claims 1-60 is considered to meet the requirements of PCT Article 33(2) and 33(3) in respect of novelty and an inventive step.

2. INDUSTRIAL APPLICABILITY
The subject matter of claims 1-60 is considered to meet the requirement of PCT Article 33(4) in respect of industrial applicability.

CLAIMS

1. An alphabetic character inputting device based on an array of 3x4 keypad buttons of a phone, using a character inputting interface, comprising:

a keypad including a plurality of key buttons to which alphabetic characters are assigned in such a manner that alphabetic characters which are found on adjacent keys in a QWERTY keyboard are arranged on one or adjacent key buttons in the keypad by dividing alphabetic characters into a Group I for left hand inputting and a Group II for right hand inputting on the QWERTY keyboard and into a 1st Character Set, a 2nd Character Set, and a 3rd Character Set according to usage frequency, selecting one alphabetic character from each Character Set to form character combinations, and distributing these character combinations over the key buttons such that the alphabetic characters of Group I are arranged in a left column or a middle column of the keypad array and the alphabetic characters of Group II are arranged in a right column or a middle column of the keypad array; and

an input key processing unit for processing the character inputting operation through the keypad and outputting corresponding characters.

2. The alphabetic character inputting device as set forth in claim 1, wherein the Group I consists of characters 'Q', 'W', 'E', 'R', 'T', 'A', 'S', 'D', 'F', 'G', 'Z', 'X', 'C', 'V' and 'B', which are assigned to numeral key buttons '1', '2', '4', '5', '7', and '8', and the Group II consists of characters 'Y', 'U', 'I', 'O', 'P', 'H', 'J', 'K', 'L', 'N', and 'M', which are assigned to numeral key buttons '2', '3', '5', '6', '8', and '9', such that at least one character is assigned to each key button.

3. The alphabetic character inputting device as set forth in claim 1, wherein the characters 'E', 'W', 'Q', 'A', 'D', 'Z', 'S', 'C', and 'X' are assigned to numeral key buttons '1', '4', and '7' which are in the left column of the keypad, such that at least one character is assigned to each key button.

4. The alphabetic character inputting device as set forth in claim 1, wherein the characters 'T', 'F', 'Y', 'R', 'G', 'V', 'H', 'U', and 'B' are assigned to numeral key buttons '2', '5', and '8', which are in the middle column of the keypad, such that at least one character is assigned to each key button.

5. The alphabetic character inputting device as set

forth in claim 1, wherein the characters 'O', 'P', 'I', 'L', 'J', 'N', 'M', and 'K' are assigned to numeral key buttons '3', '6', and '9', which are in the right column of the keypad, such that at least one character is assigned to each key button.

6. The alphabetic character inputting device as set forth in claim 1, wherein the characters 'E', 'A', and 'S' are respectively assigned to three different numeral key buttons selected from among a group of numeral key buttons comprising the numeral key buttons '1', '4', and '7'.

7. The alphabetic character inputting device as set forth in claim 1, wherein the characters 'A' and 'S' are respectively assigned to two different numeral key buttons selected from among a group of numeral key buttons comprising the numeral key buttons '4' and '7'.

8. The alphabetic character inputting device as set forth in claim 1, wherein the characters 'E', 'A', and 'S' are assigned to numeral key buttons '1', '4' and '7', respectively.

9. The alphabetic character inputting device as set forth in claim 1, wherein the characters 'T' and 'R' are

respectively assigned to two different numeral key buttons selected from among a group of numeral key buttons comprising the numeral key buttons '2' and '5'.

10. The alphabetic character inputting device as set forth in claim 1, wherein the characters 'T', 'R' and 'H' are assigned to numeral key buttons '2', '5' and '8', respectively.

11. The alphabetic character inputting device as set forth in claim 1, wherein the characters 'O' and 'I' are respectively assigned to two different numeral key buttons selected from among a group of numeral key buttons comprising the numeral key buttons '3' and '6'.

12. The alphabetic character inputting device as set forth in claim 1, wherein the characters 'O', 'I', and 'N' are assigned to numeral key buttons '3', '6' and '9', respectively.

13. The alphabetic character inputting device as set forth in claim 1, wherein the 1st Character Set is an assembly of the most frequently used characters and comprises characters 'A', 'E', 'H', 'I', 'N', 'O', 'R', 'S', and 'T', each of which is inputted using a single key button

operation.

14. The alphabetic character inputting device as set forth in claim 1, wherein the 2nd Character Set consists of characters 'C', 'D', 'F', 'G', 'L', 'M', 'P', 'U', and 'W' and the 3rd Character Set consists of characters 'B', 'J', 'K', 'Q', 'V', 'X', 'Y', and 'Z'.

15. The alphabetic character inputting device as set forth in claim 1, wherein all of the characters 'E', 'W', and 'Q' are assigned to the numeral key button '1' and the character 'E' is inputted using a single key button operation.

16. The alphabetic character inputting device as set forth in claim 1, wherein both of the characters 'O' and 'P' are assigned to the numeral key button '3' and the character 'O' is inputted using a single key button operation.

17. The alphabetic character inputting device as set forth in claim 1, wherein the characters 'D', 'C', and 'X' are assigned to numeral key buttons '4' and '7', the characters 'L', 'J', 'M', and 'K' to numeral key buttons '6' and '9', and the characters 'F', 'G', 'V', and 'B' to numeral key buttons '2', '5' and '8', such that at least one

character is assigned to each key button.

18. The alphabetic character inputting device as set forth in claim 1, wherein the characters 'T', 'H' and 'E' are assigned to numeral key buttons '2', '8' and '1', respectively, and each of the characters is inputted using a single operation of the corresponding key button.

19. The alphabetic character inputting device as set forth in claim 1, wherein all of the characters 'E', 'W' and 'Q' are assigned to the numeral key button '1', all of the characters 'A', 'D', and 'Z' are assigned to the numeral key button '4', and all of the characters 'S', 'C' and 'X' are assigned to the numeral key button '7'.

20. The alphabetic character inputting device as set forth in claim 1, wherein all of the characters 'T', 'F' and 'Y' are assigned to the numeral key button '2', all of the characters 'R', 'G' and 'V' are assigned to the numeral key button '5', and all of the characters 'H', 'U' and 'B' are assigned to the numeral key button '8'.

21. The alphabetic character inputting device as set forth in claim 1, wherein both of the characters 'O' and 'P' are assigned to the numeral key button '3', all of the

characters 'I', 'L' and 'J' are assigned to the numeral key button '6', and all of the characters 'N', 'M' and 'K' are assigned to the numeral key button '9'.

22. The alphabetic character inputting device as set forth in claim 1, wherein when a predetermined key button is pressed during the inputting of characters using the keypad, the input key processing unit alters the keypad from a character input mode to a symbol input mode to provide an array of symbols for processing symbol inputting operation through the keypad, and returning to the previous character input mode after the input of a symbol.

23. The alphabetic character inputting device as set forth in any of claims 1 to 22, wherein the input key processing unit displays a currently active keypad array on a screen and outputs characters and symbols in response to key inputs corresponding to the characters or symbols.

24. A Korean character inputting device based on an array of 3x4 keypad buttons of a phone, using a character inputting interface, comprising:

a keypad including a plurality of key buttons to which Korean characters are assigned in such a manner that Korean vowels are arranged on the key buttons in consideration of

the shape of assembled Korean letters by assigning Korean consonants to a Group I for left hand inputting and Korean vowels to a Group II for right hand inputting, and dividing Korean characters into a 1st Character Set, a 2nd Character Set, and a 3rd Character Set according to usage frequency, selecting one Korean consonant or vowel character from each Character Set to form character combinations, and distributing these character combinations over the key buttons such that the Korean characters of Group I are arranged in a left column or a middle column of the keypad array and the Korean characters of Group II are arranged in a right column or a middle column of the keypad array; and

an input key processing unit for processing the character inputting operation through the keypad and outputting corresponding characters.

25. The Korean character inputting device as set forth in claim 24, wherein the Group I consists of Korean consonant characters 'ㄱ', 'ㄴ', 'ㄷ', 'ㄹ', 'ㅁ', 'ㅂ', 'ㅅ', 'ㅇ', 'ㅈ', 'ㅊ', 'ㅋ', 'ㅌ', 'ㅍ', 'ㅎ', 'ㄲ', 'ㄸ', 'ㅃ', 'ㅆ', and 'ㅉ', which are assigned to numeral key buttons '1', '2', '4', '5', '7', '8', and '0', and the Group II consists of Korean vowel characters 'ㅏ', 'ㅑ', 'ㅓ', 'ㅕ', 'ㅗ', 'ㅛ', 'ㅜ', 'ㅠ', 'ㅡ', and 'ㅣ', which are assigned to numeral key buttons '3', '6', '8', '9', and '0', such that at least one

character is assigned to each key button.

26. The Korean character inputting device as set forth in claim 24, wherein the 1st Character Set is an assembly of the most frequently used consonant or vowel characters and comprises characters 'ㄱ', 'ㄴ', 'ㄹ', 'ㅅ', 'ㅇ', 'ㅏ', 'ㅓ', 'ㅗ', 'ㅡ', and 'ㅣ', each of which is inputted using a single key button operation.

27. The Korean character inputting device as set forth in claim 24, wherein the characters 'ㅓ', 'ㅣ' and 'ㅏ' are respectively assigned to three different numeral key buttons selected from among a group of numeral key buttons comprising the numeral key buttons '3', '6', and '9', the characters 'ㅗ' and 'ㅡ' are respectively assigned to two different numeral key buttons selected from among a group of numeral key buttons comprising the numeral key buttons '8' and '0', and the characters 'ㄱ', 'ㄴ', 'ㄹ', 'ㅅ' and 'ㅇ' are respectively assigned to five different numeral key buttons selected from among a group of numeral key buttons comprising the numeral key buttons '1', '2', '4', '5' and '7'.

28. The Korean character inputting device as set forth in claim 24, wherein the characters 'ㄱ', 'ㅅ', 'ㅓ', 'ㄴ',

'ㅇ', 'ㅣ', 'ㄹ', 'ㅗ', 'ㅏ' and 'ㅡ' are respectively assigned to numeral key buttons '1', '2', '3', '4', '5', '6', '7', '8', '9' and '0'.

29. The Korean character inputting device as set forth in claim 24, wherein the 2nd Character Set consists of the Korean consonant or vowel characters 'ㄷ', 'ㅁ', 'ㅂ', 'ㅈ', 'ㅊ', 'ㅎ', 'ㅆ', 'ㅋ', 'ㅛ', and 'ㅜ', and the 3rd Character Set consists of the Korean consonant or vowel characters 'ㅋ', 'ㅌ', 'ㅍ', 'ㄲ', 'ㄸ', 'ㅃ', 'ㅉ', 'ㅑ', and 'ㅠ'.

30. The Korean character inputting device as set forth in claim 24, wherein the Korean characters 'ㄱ' and 'ㄲ' are both assigned to the numeral key button '1', the Korean character 'ㅋ' is assigned to the numeral key button '2', the Koran characters 'ㄷ' and 'ㄸ' are both assigned to the numeral key button '4', the Korean character 'ㅌ' is assigned to the numeral key button '5', the Korean characters 'ㅂ' and 'ㅃ' are both assigned to the numeral key button '7', and the Korean character 'ㅍ' is assigned to the numeral key button '8'.

31. The Korean character inputting device as set forth in claim 24, wherein the characters 'ㅅ', 'ㅆ', 'ㅈ', 'ㅊ' and 'ㅉ' are assigned to numeral key buttons '2', '8' and

'0' such that at least one character is assigned to each key button.

32. The Korean character inputting device as set forth in claim 24, wherein when a predetermined key button is pressed during the inputting of characters using the keypad, the input key processing unit alters the keypad from a character input mode to a symbol input mode to provide an array of symbols for processing symbol inputting operation through the keypad, and returning to the previous character input mode after the input of a symbol.

33. The Korean character inputting device as set forth in any of claims 24 to 32, wherein the input key processing unit displays a currently active keypad array on a screen and outputs characters and symbols in response to key inputs corresponding to the characters or symbols.

34. A symbol character inputting device, based on a keypad including a plurality of key buttons to each of which is assigned a numeral, wherein symbol characters are arranged on the key buttons in consideration of the shape of symbols and numerals by dividing symbol characters into a 1st Character Set, a 2nd Character Set, and a 3rd Character Set according to usage frequency, selecting one symbol

character from each Character Set to form symbol character combinations, and distributing these symbol character combinations over the key buttons; and

an input key processing unit for processing the character inputting operation through the keypad and outputting corresponding symbol characters.

35. The symbol character inputting device as set forth in claim 34, wherein the 1st Character Set is an assembly of the most frequently used symbol characters and comprises symbol characters '!', '?', '-', ''', '"', '@', ';', ':', ',' and '.', each of which is inputted using a single key button operation.

36. The symbol character inputting device as set forth in claim 34, wherein the 2nd Character Set comprises the symbol characters '/', '~', '+', '=', '<', '>', '(', ')' and '&' and the 3rd Character Set comprises the symbol characters '\', '|', '[', ']', '_', '{', '}' and '$'.

37. The symbol character inputting device as set forth in claim 34, wherein when a predetermined key button is pressed during the inputting of characters using the keypad, the input key processing unit alters the keypad from a character or numeral input mode to a symbol input mode to

provide an array of symbols for processing symbol inputting operation through the keypad, and returning to the previous character or numeral input mode after the input of a symbol.

38. The symbol character inputting device as set forth in claim 37, wherein the predetermined key button is the key button '*'.

39. The symbol character inputting device as set forth in claim 34, wherein the symbol characters '!' and '?' are respectively assigned to numeral key buttons '1' and '2'.

40. The symbol character inputting device as set forth in claim 34, wherein the symbol characters '<' and '>' are respectively assigned to the numeral key buttons '4' and '7'.

41. The symbol character inputting device as set forth in claim 34, wherein the symbol characters '(' and ')' are respectively assigned to the numeral key buttons '6' and '9'.

42. The symbol character inputting device as set forth in claim 34, wherein the symbol characters ''' and '"' are respectively assigned to the numeral key buttons '4' and '5'.

43. The symbol character inputting device as set forth

in claim 34, wherein the symbol characters ';', ':', ',', and '.' are respectively assigned to the numeral key buttons '7', '8', '9' and '0'.

44. The symbol character inputting device as set forth in claim 34, wherein the characters '1', '!', and '/' are assigned to the same key button.

45. The symbol character inputting device as set forth in claim 34, wherein the characters '2', '?' and '~' are assigned to the same key button.

46. The symbol character inputting device as set forth in claim 34, wherein the characters '4', "'", and '<' are assigned to the same key button.

47. The symbol character inputting device as set forth in claim 34, wherein the characters '5', '"', and '=' are assigned to the same key button.

48. The symbol character inputting device as set forth in claim 34, wherein the characters '6', '@', and '(' are assigned to the same key button.

49. The symbol character inputting device as set forth

in claim 34, wherein the characters '7', ';', and '>' are assigned to the same key button.

50. The symbol character inputting device as set forth in claim 34, wherein the characters '8', ':', and '&' are assigned to the same key button.

51. The symbol character inputting device as set forth in claim 34, wherein the characters '9', ',', and ')' are assigned to the same key button.

52. The symbol character inputting device as set forth in claim 34, wherein the characters '0' and '.' are assigned to the same key button.

53. The symbol character inputting device as set forth in claim 34, wherein the characters '[' and '{' are respectively assigned to two different numeral key buttons selected from among a group of numeral key buttons comprising the numeral key buttons '4' and '6', and the characters ']' and '}' are respectively assigned to two different numeral key buttons selected from among a group of numeral key buttons comprising the numeral key buttons '7' and '9'.

54. The symbol character inputting device as set forth in one of claims 34 to 53, wherein the input key processing unit displays a currently active keypad array on a screen and outputs characters and symbols in response to key inputs corresponding to the characters or symbols.

55. A method for inputting alphabetic characters through a character inputting interface based on an array of 3x4 keypad buttons of a phone, comprising:

inputting alphabetic characters using a keypad, said keypad including a plurality of key buttons on which alphabetic characters are assigned in such a manner that alphabetic characters which are found on adjacent keys in a QWERTY keyboard are arranged on one or adjacent key buttons in the keypad by dividing alphabetic characters into a Group I for left hand inputting and a Group II for right hand inputting on the QWERTY keyboard and into a 1st Character Set, a 2nd Character Set, and a 3rd Character Set according to usage frequency, selecting one alphabetic character from each Character Set to form character combinations, and distributing these character combinations over the key buttons such that the alphabetic characters of Group I are arranged in a left column or a middle column of the keypad array and the alphabetic characters of Group II are arranged in a right column or a middle column of the keypad array;

and

processing the signals inputted through the keypad and outputting characters corresponding to the inputted signals.

56. The method as set forth in claim 55, wherein the alphabetic characters of the 1st Character Set and the 2nd Character Set are inputted by pressing corresponding key buttons for a time that is shorter or longer than a predetermined time, respectively, and the alphabetic characters of the 3rd Character Set are inputted by pressing the key button '#' and corresponding key buttons in succession.

57. A method for inputting Korean characters through a character inputting interface based on an array of 3x4 keypad buttons of a phone, comprising:

inputting alphabetic characters using a keypad, said keypad including a plurality of key buttons to which Korean characters are assigned in such a manner that Korean vowels are arranged on the key buttons in consideration of the shape of assembled Korean letters by assigning Korean consonants to a Group I for left hand inputting and Korean vowels to a Group II for right hand inputting, and dividing Korean characters into a 1st Character Set, a 2nd Character Set, and a 3rd Character Set according to usage frequency,

selecting one Korean consonant or vowel character from each Character Set to form character combinations, and distributing these character combinations over the key buttons such that the Korean characters of Group I are arranged in a left column or a middle column of the keypad array and the Korean characters of Group II are arranged in a right column or a middle column of the keypad array; and

processing the signals inputted through the keypad and outputting characters corresponding to the inputted signals.

58. The method as set forth in claim 57, wherein the Korean characters of the 1st Character Set and the 2nd Character Set are inputted by pressing corresponding key buttons for a time that is shorter or longer than a predetermined time, respectively, and the alphabetic characters of the 3rd Character Set are inputted by pressing the key button '#' and corresponding key buttons in succession.

59. A method for inputting symbol characters using a keypad including a plurality of key buttons to each of which is assigned a numeral, comprising:

inputting symbol characters by use of the keypad on which the symbol characters are arranged in consideration of the shape of symbols and numerals by dividing symbol

characters into a 1st Character Set, a 2nd Character Set, and a 3rd Character Set according to usage frequency, selecting one symbol character from each Character Set to form symbol character combinations, and distributing these symbol character combinations over the key buttons; and

processing the signals inputted through the keypad and outputting characters corresponding to the inputted signals.

60. The method as set forth in claim 59, wherein the symbol characters of the 1st Character Set and the 2nd Character Set are inputted by pressing corresponding key buttons for a time that is shorter or longer than a predetermined time, respectively, and the alphabetic characters of the 3rd Character Set are inputted by pressing the key button '#' and corresponding key buttons in succession.